



PTO/SB/08A (08-03)

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Substitute for form 1449/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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## Complete if Known

Application Number	10/823,483
Filing Date	04/12/2004
First Named Inventor	Avto TAVKHELIDZE
Art Unit	2834
Examiner Name	
Attorney Docket Number	12025.US.CIP.CIP

Sheet 1 of 1

### U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
[Handwritten initials]		US- 3,821,462-A	06-28-1974	Kaufman et al.	174/15C
		US- 4,188,571-A	02-12-1980	Brunson	322/2R
		US- 4,373,142-A	02-08-1983	Morris	310/306
		US- 5,068,535-A	11-26-1991	Rabalais, JW	250/309
		US- 5,503,963-A	04-02-1996	Bifano, TG	430/301
		US- 6,117,344-A	09-12-2000	Cox, IW et al.	216/11
		US- 2002/0170172-A1	11-21-2002	Tavkhelidze et al.	29/1842
		US- 6,489,704-B1	12-03-2002	Kucherov, et al.	310/306
		US- 2003/0042819-A1	03-06-2003	Martinovsky, et al.	310/306
	US- 2004/0029341-A1	02-12-2004	Cox et al.	438/237	
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### FOREIGN PATENT DOCUMENTS

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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
[Handwritten initials]		WO 99/10974-A1	03-04-1999	COX, R.T.	HOZN 10/00	
		WO 03/021758-A2	03-03-2003	MARTINOVSKY et	HOZM	
		WO 03/083177-A3	10-09-2003	TAVKHELIDZE et	CZSF 3/02	

Examiner Signature		Date Considered	2/6/06
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		Application Number	10/823,483
		Filing Date	04/12/2004
		First Named Inventor	Avto TAVKHELIDZE
		Art Unit	
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U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code² (if known)			
John T M J M J M J M J M J M J M J M J		US- 2,510,397	06-06-1950	Hansell, C.W.	374/174
		US- 2,915,652	12-01-1959	Hatsopoulos, G.N.	210/306
		US- 3,021,472	02-13-1962	Hernqvist, K.G.	322/2R
		US- 3,118,107	01-14-1964	Gabor, D.	322/2R
		US- 3,194,989	07-13-1965	Garbuny	310/306
		US- 3,169,200	02-09-1965	Huffman, F.N.	310/306
		US- 3,173,032	03-09-1965	Maynard, J.T.	310/306
		US- 3,238,395	03-01-1966	Sense, K.A.	310/306
		US- 3,239,745	03-08-1966	Hernqvist, K.G.	322/2R
		US- 3,267,307	08-16-1966	Fox, R.	310/306
		US- 3,267,308	08-16-1966	Hernqvist, K.G.	310/306
		US- 3,281,372	10-25-1966	Haas, G.A.	252/644
		US- 3,300,660	01-24-1967	Bensimon, J.	310/306
		US- 3,328,611	06-27-1967	Davis, E.D.	310/306
		US- 3,376,437	04-02-1968	Meyerand, Jr, R.G	310/306
		US- 3,393,330	07-16-1968	Vary, A.	310/306
		US- 3,470,393	09-30-1969	Moncorge, G.	310/306
		US- 3,515,908	06-02-1970	Caldwell, F.	310/306
	US- 3,519,854	07-07-1970	Davis, E.D.	310/306	

FOREIGN PATENT DOCUMENTS						
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		Country Code³ Number⁴ Kind Code⁵ (if known)				
Abstract ONLY		SU 861916 A	09-10-1981	Burmistrov, V.M	F28D 15/00	
		JP 404080964A	03-13-1992	Ando, Y.	H01L 29/68	
		WO 97/02460 A1	01-23-1997	Edelson, J.S.	F28D 15/00	
		WO 99/13562 A1	03-18-1999	Tavkheldze et	H02N 2/00	
		WO 03/090245 A1	10-30-2003	Tavkheldze et	H01J 17/30	

Examiner Signature	<i>John T. M. J. M. J. M. J. M. J. M. J. M. J. M. J. M. J. M. J.</i>	Date Considered	2/6/06
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Sheet <u>2</u> of <u>6</u>	Application Number: 10/823,483 Filing Date: 04/12/2004 First Named Inventor: Avto TAVKHELIDZE Art Unit: _____ Examiner Name: _____ Attorney Docket Number: _____

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[Handwritten Signature]		US- 3,578,992	05-18-1971	Shimada, K. Paine, T.O.	310/14
		US- 3,740,592 A	06-19-1973	Engdahl et al.	310/14
		US- 3,843,896	10-22-1974	Rason et al.	310/14
		US- 4,004,210	01-18-1977	Yater, J.C.	322/2R
		US- 4,039,352	08-02-1977	Marinescu, M.	136/205
		US- 4,039,352 A	08-02-1977	Marinescu	136/205
		US- 4,011,582 A	03-08-1977	Cline et al.	357/60
		US- 4,063,965 A	12-20-1977	Cline et al.	148/15
		US- 4,224,461	09-23-1980	Snyder, Jr. et al.	136/233
		US- 4,281,280	07-28-1981	Richards	322/2R
		US- 4,410,951	10-18-1983	Nakamura, T.	
		US- 4,423,347	12-27-1983	Kleinschmidt, P.	310/331
		US- 4,667,126	05-19-1987	Fitzpatrick, G.O.	310/306
		US- 4,937,489	06-26-1990	Hattori, S.	310/328
		US- 4,958,201	09-18-1990	Mimura, T.	357/116
		US- 5,028,835	07-02-1991	Fitzpatrick, G.O.	313/14
		US- 5,049,775	09-17-1991	Smits, J.	310/328
	US- 5,083,056	01-21-1992	Kondou, Y.	310/332	
	US- 5,119,151	06-02-1992	Onda, K.	357/22	

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Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	† <sup>6</sup>
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Sheet	3	of	6
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		Number-Kind Code <sup>2</sup> (if known)			
J. T. Morgan / T. J. Cameron		US- 5,233,205	08-03-1993	Usagawa, T.	257 / 23
		US- 5,229,320	07-20-1993	Ugajin, R.	437 / 107
		US- 5,247,223	09-21-1993	Mori, Y.	313 / 308
		US- 5,351,412	10-04-1994	Furuhata, T.	331 / 58
		US- 5,307,311	04-26-1994	Sliwa, Jr.	365 / 174
		US- 5,371,388	12-06-1994	Oda, H.	257 / 194
		US- 5,332,952	07-26-1994	Ugajin, R.	315 / 349
		US- 5,336,547 A	08-09-1994	Kawakita et al.	428 / 209
		US- 5,356,484	10-18-1994	Yater, J.C.	136 / 200
		US- 5,410,166	04-25-1995	Kennel	257 / 77 <del>257 / 77</del>
		US- 5,465,021	11-07-1995	Visscher, A.	310 / 328
		US- 5,487,790	01-30-1996	Yasuda	136 / 200
		US- 5,521,735	05-28-1996	Shimizu, A.	357 / 154
		US- 5,592,042	01-07-1997	Takuchi, Y.	310 / <del>328</del> 328
		US- 5,675,972 A	10-14-1997	Edelson, J.S.	62 / 31
		US- 5,699,668 A	12-23-1997	Cox, I.W.	62 / 31
		US- 5,701,043	12-23-1997	Razzaghi, M.	3w / 26
	US- 5,722,242 A	03-03-1998	Edelson, J.S.	62 / 31	
	US- 5,810,980	09-22-1998	Edelson, J.S.	204 / 298	

FOREIGN PATENT DOCUMENTS						
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Paul J. Ingosh		US- 5,874,039	02-23-1999	Edelson, J.S.	204/260R
		US- 5,917,156 A	06-29-1999	Nobori et al.	174/250
		US- 5,981,071	11-09-1999	Cox, I.W.	428/408
		US- 5,981,866	11-09-1999	Edelson, J.S.	136/256
		US- 5,973,259	10-26-1999	Edelson, J.S.	136/254
		US- 5,994,638	11-30-1999	Edelson, J.S.	136/205
		US- 6,084,173	07-04-2000	DiMatteo	136/201
		US- 6,064,137	05-16-2000	Cox, R.T.	310/306 <del>136/201</del>
		US- 6,089,311	07-18-2000	Edelson, J.S.	165/104, 23
		US- 6,225,205 B1	05-01-2001	Kinoshita	438/413
		US- 6,281,514	08-28-2001	Tavkhelidze, A.	250/4931
		US- 6,214,651 B1	04-10-2001	Cox	438/141
		US- 2001/0046749 A1	11-29-2001	Tavkhelidze et al.	438/380
		US- 6,417,060 B2	07-09-2002	Tavkhelidze et al.	438/380
		US- 2003/0068431 A1	04-10-2003	Taliashvili et al.	427/58
		US- 6,720,704 B1	04-13-2004	Tavkhelidze et al.	310/306
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but		FITZPATRICK, G.O. ET AL. "Close-Spaced Thermionic Converters with Active Spacing Control and Heat Pipe Isothermal Emitters." IEEE. vol. 2: pp 920-927 (1996).	
but		FITZPATRICK, G.O. ET AL. "Demonstration of Close-Spaced Thermionic Converters." Abs. Papers. Am. Chem. Soc. 93355: pp 1.573-1.580 (1993).	
but		MAHAN, G.D. "Thermionic Refrigeration." J. Appl. Phys 76: pp 4362-4366 (1994).	
but		HUFFMAN, F.N. ET AL. "Preliminary Investigation of a Thermotunnel Converter." I.E.C.E.C. vol. 1: pp 573-579 (1988).	
but		HOUSTON, J.M. "Theoretical Efficiency of the Thermionic Energy Converter." J. Appl. Phys. 30: pp 481-487 (1959).	
but		KING, D.B. ET AL. "Results from the Microminiature Thermionic Converter Demonstration Testing Program." Am. Inst. of Phys. 1-56396-846: pp 1432-1436 (1999).	
but		ZENG, T AND CHEN, G. "Hot Electron Effects on Thermionic Emission Cooling in Heterostructures." Mat. Res. Soc. 545: pp 467-472 (1999).	
but		SHAKOURI, A. ET AL. "Enhanced Thermionic Emission Cooling in High Barrier Superlattice Hetero- structures." Mat. Res. Soc. 545: pp 449-458 (1999).	
but		FUKUDA, R. ET AL. "Development of the Oxygenated Thermionic Energy Converters Utilizing the Sputtered Metal Oxides as a Collector." Am. Inst. Phys. pp 1444-1451 (1999).	
but		SVENSSON, R. AND HOLMID, L. "TEC as Electric Generator in an Automobile Catalytic Converter." IEEE. vol. 2: pp 941-944 (1996).	

Examiner Signature		Date Considered	2/13/06
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<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Substitute for form 1449/PTO				<i>Complete if Known</i>	
				Application Number	10/823,483
<b>INFORMATION DISCLOSURE                  STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)				Filing Date	04/12/2004
				First Named Inventor	Avto TAVKHELIDZE
				Art Unit	
				Examiner Name	
				Attorney Docket Number	
Sheet	6	of	6		

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
[Signature]		FITZPATRICK G O ET AL: "Updated perspective on the potential for thermionic conversion to meet 21st century energy needs" IECEC'97. PROCEEDINGS OF THE 32nd INTERSOCIETY ENERGY CONVERSION ENGINEERING CONFERENCE. ENERGY SYSTEMS, RENEWABLE ENERGY RESOURCES, ENVIRONMENTAL IMPACT AND POLICY IMPACTS ON ENERGY. HONOLULU, HI. JULY 27 - AUG. 1, 1997. INTERSOCIETY ENERGY CONVERS. vol 3 & 4, 27 July 1997 (1997-07-27). pages 1045-1051.	
[Signature]		KALANDARISHVILI A G: "The basics of the technology of creating a small interelectrode spacing in thermionic energy converters with the use of two-phase systems" IECEC'97. PROCEEDING OF THE 32nd INTERSOCIETY ENERGY CONVERSION ENGINEERING CONFERENCE. ENERGY SYSTEMS, RENEWABLE ENERGY RESOURCES, ENVIRONMENTAL IMPACT AND POLICY IMPACTS ON ENERGY. HONOLULU, HI. JULY 27 - AUG 1, 1997. INTERSOCIETY ENERGY CONVERS. vol. 3 & 4, 27 July 1997 (1997-07-27). pages 1052-1056.	

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